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09/30/766

L3 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:704593 CAPLUS
DN 137:229450
TI Transgenic Arabidopsis expressing soybean **raffinose synthase** to accumulate raffinose for drought stress resistance
IN Osumi, Chieko; Taiji, Teruaki; Shinozaki, Kazuo
PA Ajinomoto Co., Inc., Japan; Institute of Physical and Chemical Research
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002262885	A2	20020917	JP 2001-72668	20010314
	US 2003074696	A1	20030417	US 2001-810186	20010319
PRAI	JP 2001-72668	A	20010314		

L3 ANSWER 2 OF 22 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 1
AN 2002:574072 BIOSIS
DN PREV200200574072
TI Functional expression of a cDNA encoding pea (*Pisum sativum* L.) **raffinose synthase**, partial purification of the enzyme from maturing seeds, and steady-state kinetic analysis of raffinose synthesis.
AU Peterbauer, Thomas; Mach, Lukas; Mucha, Jan; Richter, Andreas (1)
CS (1) Institute of Ecology, University of Vienna, Althanstrasse 14, 1090, Vienna: andreas.richter@univie.ac.at Austria
SO Planta (Berlin), (September, 2002) Vol. 215, No. 5, pp. 839-846. print. ISSN: 0032-0935.
DT Article
LA English

L3 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:551699 CAPLUS
DN 135:150077
TI Raffinose synthetase gene for preparation of transgenic plant
IN Yasuda, Miyuki; Watanabe, Eihiro; Oeda, Kenji
PA Sumitomo Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001204281	A2	20010731	JP 2000-16908	20000126
PRAI	JP 2000-16908		20000126		

L3 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:217706 CAPLUS
DN 134:247992
TI Variant soybean **raffinose synthase** cDNA and uses in obtaining low raffinose plants and genotyping
IN Watanabe, Eihiro; Oeda, Kenji
PA Sumitomo Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 30 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2001078783	A2	20010327	JP 2000-200571	20000703
PRAI	JP 1999-196036	A	19990709		

L3 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2003:4381 BIOSIS
 DN PREV200300004381
 TI Gene expression of galactinol synthase (GalS) and **raffinose synthase** (RafS) in maize seeds and Hi-II callus cells.
 AU Zhao, Tian-Yong (1); Downie, Bruce (1); Meeley, Robert B.; Bradford, Kent J.
 CS (1) Department of Horticulture, University of Kentucky, Lexington, KY, USA: tzhao2@pop.uky.edu USA
 SO Plant Biology (Rockville), (2001) Vol. 2001, pp. 68. print.
 Meeting Info.: Joint Annual Meetings of the American Society of Plant Biologists and the Canadian Society of Plant Physiologists Providence, Rhode Island, USA July 21-25, 2001 American Society of Plant Biologists
 DT Conference
 LA English

L3 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 2000:291270 CAPLUS
 DN 132:318623
 TI Protein and cDNA sequences of plant **raffinose synthase** homologs and uses thereof to alter **raffinose synthase** levels in transformed plants
 IN Allen, Stephen M.; Hitz, William D.
 PA E.I. Du Pont De Nemours and Company, USA
 SO PCT Int. Appl., 58 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000024915	A2	20000504	WO 1999-US24923	19991022
	WO 2000024915	A3	20000810		
	W:	AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRAI	US 1998-105451P	P	19981023		

L3 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 2000:774015 CAPLUS
 DN 133:330526
 TI Novel clones of the soybean **raffinose synthase** gene promoter and uses thereof for foreign gene expression in plant cells
 IN Ishige, Fumiharu; Watanabe, Eihiro; Oeda, Kenji
 PA Sumitomo Chemical Co., Ltd., Japan
 SO Eur. Pat. Appl., 36 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1048733	A2	20001102	EP 2000-108962	20000427
	EP 1048733	A3	20020731		
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,			

IE, SI, LT, LV, FI, RO
 JP 2001136978 A2 20010522 JP 2000-120545 20000421
 US 6337430 B1 20020108 US 2000-561825 20000428
 PRAI JP 1999-124527 A 19990430
 JP 1999-247211 A 19990901

L3 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 1999:296900 CAPLUS
 DN 131:2183
 TI Cloning of cDNA for **raffinose synthase** from cucumber
 and soybeans and use for regulating raffinose content in plants
 IN Osumi, Chieko; Nozaki, Jinji; Kida, Takao
 PA Ajinomoto Co., Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 37 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11123080	A2	19990511	JP 1997-292969	19971024
PRAI	JP 1997-292969		19971024		

L3 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 1999:708499 CAPLUS
 DN 131:334132
 TI Plant **raffinose synthase** genes, cDNA sequences and
 uses thereof, and methods for their detection and amplification
 IN Watanabe, Eihiro; Oeda, Kenji
 PA Sumitomo Chemical Company, Limited, Japan
 SO Eur. Pat. Appl., 55 pp.
 CODEN: EPXXDW
 DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 953643	A2	19991103	EP 1999-107430	19990427
	EP 953643	A3	20010321		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 11313677	A2	19991116	JP 1998-120550	19980430
	JP 2000166562	A2	20000620	JP 1998-345590	19981204
	JP 2000014389	A2	20000118	JP 1998-351246	19981210
	AU 9923967	A1	19991111	AU 1999-23967	19990426
	AU 760702	B2	20030522		
	CN 1237635	A	19991208	CN 1999-105331	19990430
	BR 9902058	A	20000509	BR 1999-2058	19990430
PRAI	JP 1998-120550	A	19980430		
	JP 1998-120551	A	19980430		
	JP 1998-345590	A	19981204		
	JP 1998-351246	A	19981210		

L3 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 1998:217308 CAPLUS
 DN 128:318794
 TI Cloning of cDNA for **raffinose synthase** from cucumber,
 and its use for preparing raffinose or transgenic plants low in
 raffinose-type oligosaccharides
 IN Osumi, Chieko; Nozaki, Shinji; Kida, Takao
 PA Ajinomoto Co., Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 26 pp.
 CODEN: JKXXAF
 DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10084973	A2	19980407	JP 1997-111124	19970428
	US 6166292	A	20001226	US 1997-846234	19970428
	WO 9849273	A1	19981105	WO 1997-JP3879	19971024
	W: AU, BR, CA, CN, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9881874	A1	19981124	AU 1998-81874	19971024
	AU 735864	B2	20010719		
	EP 994186	A1	20000419	EP 1997-909634	19971024
	R: DE, FR, GB, NL				
	BR 9714675	A	20000627	BR 1997-14675	19971024
	CN 1259996	A	20000712	CN 1997-182260	19971024
PRAI	JP 1996-107682	A	19960426		
	JP 1996-198079	A	19960726		
	JP 1997-111124	A	19970428		
	WO 1997-JP3879	W	19971024		

L3 ANSWER 18 OF 22 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:339293 BIOSIS
DN PREV199800339293

TI Characterization and gene cloning of **raffinose synthase**
from Cucumis sativus.

AU Ohsumi, Chieko; Nozaki, Jinshi; Kida, Takao

CS Ajinomoto Co. Inc., CRL., Kawasaki 210 Japan

SO Plant and Cell Physiology, (1998) Vol. 39, No. SUPPL., pp. S131.

Meeting Info.: 1998 Annual Meeting of the Japanese Society of Plant
Pathologists Tokyo, Japan May 3-5, 1998 Japanese Society of Plant
Pathologists

. ISSN: 0032-0781.

QK 710. P55

DT Conference

LA English

L3 ANSWER 20 OF 22 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:119880 BIOSIS
DN PREV200300119880

TI Characterization and cDNA cloning of **raffinose synthase**
from Cucumis sativus.

AU Ohsumi, Chieko (1); Nozaki, Jinshi (1); Kida, Takao (1)

CS (1) Central Research Laboratories, Ajinomoto Co., Inc., Kawasaki, Japan
Japan

SO Plant Biology (Rockville), (1998) Vol. 1998, pp. 87-88. print.

Meeting Info.: Annual Meeting of the American Society of Plant
Physiologists combined with the 9th International Conference on

Arabidopsis Research Madison, WI, USA June 27-July 01, 1998 American
Society of Plant Physiologists (ASPP)

DT Conference

LA English

=> d his

(FILE 'HOME' ENTERED AT 10:54:10 ON 06 AUG 2003)

FILE 'AGRICOLA, BIOSIS, CAPLUS, EMBASE' ENTERED AT 10:54:15 ON 06 AUG 2003

L1 32 S RAFFINOSE SYNTHASE

L2 32 S RAFFINOSE SYNTHA####

L3 22 DUP REM L2 (10 DUPLICATES REMOVED)

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Err ors
1	BRS	L1	22152	raffinose ajd synthase4	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2003/08/06 15:20			0
2	BRS	L2	406	11 and raffinose.clm.	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2003/08/06 15:21			0
3	BRS	L3	7	12 and synthase.clm.	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2003/08/06 15:21			0
4	BRS	L5	3	14 and plant.clm.	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2003/08/06 15:22			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Err ors
5	BRS	L4	179	11 and raffinose.ti.	USPAT; US - PGP UB; EPO; JPO; DERWEN T	2003/08/06 15:23			0

PI EP 1048733 A2 20001102 EP 2000-108962 20000427
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO
 JP 2001136978 A2 20010522 JP 2000-120545 20000421
 US 6337430 B1 20020108 US 2000-561825 20000428
 PRAI JP 1999-124527 A 19990430
 JP 1999-247211 A 19990901

File Copy
 09/30/97

=> d 6,7

L2 ANSWER 6 OF 17 BIOSIS COPYRIGHT 2002 BIOSIS
 AN 2001:290206 BIOSIS
 DN PREV200100290206
 TI Raffinose synthetase gene, method of producing raffinose and transgenic plant.
 AU Osumi, Chieko (1); Nozaki, Jinshi; Kida, Takao
 CS (1) Kawasaki Japan
 ASSIGNEE: Ajinomoto Co., Inc., Tokyo, Japan
 PI US 6166292 December 26, 2000
 SO Official Gazette of the United States Patent and Trademark Office Patents, (Dec. 26, 2000) Vol. 1241, No. 4, pp. No Pagination. e-file.
 ISSN: 0098-1133.
 DT Patent
 LA English

L2 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:291270 CAPLUS
 DN 132:318623
 TI Protein and cDNA sequences of plant **raffinose synthase** homologs and uses thereof to alter **raffinose synthase** levels in transformed plants
 IN Allen, Stephen M.; Hitz, William D.
 PA E.I. Du Pont De Nemours and Company, USA
 SO PCT Int. Appl., 58 pp.
 CODEN: PIXXD2
 DT Patent
 LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000024915	A2	20000504	WO 1999-US24923	19991022
WO 2000024915	A3	20000810		
W: AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI US 1998-105451	P	19981023		

L2 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Raffinose synthetase gene for preparation of transgenic plant

L2 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Variant soybean **raffinose synthase** cDNA and uses in obtaining low raffinose plants and genotyping

L2 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Analysis of the raffinose family oligosaccharide pathway in pea seeds with contrasting carbohydrate composition

L2 ANSWER 4 OF 17 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 1
TI Inactivation of Arabidopsis SIP1 leads to reduced levels of sugars and drought tolerance.

L2 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Water stress-regulated gene expression in Cicer arietinum seedlings and plants

L2 ANSWER 6 OF 17 BIOSIS COPYRIGHT 2002 BIOSIS
TI Raffinose synthetase gene, method of producing raffinose and transgenic plant.

L2 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Protein and cDNA sequences of plant **raffinose synthase** homologs and uses thereof to alter **raffinose synthase** levels in transformed plants

L2 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Novel clones of the soybean **raffinose synthase** gene promoter and uses thereof for foreign gene expression in plant cells

L2 ANSWER 9 OF 17 AGRICOLA DUPLICATE 2
TI Genetic analysis of seed-soluble oligosaccharides in relation to seed storability of Arabidopsis.

L2 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI The complete sequence of a heterochromatic island from a higher eukaryote

L2 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Cloning of cDNA for **raffinose synthase** from cucumber and soybeans and use for regulating raffinose content in plants

L2 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Plant **raffinose synthase** genes, cDNA sequences and uses thereof, and methods for their detection and amplification

L2 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Cloning of cDNA for **raffinose synthase** from cucumber, and its use for preparing raffinose or transgenic plants low in raffinose-type oligosaccharides

L2 ANSWER 14 OF 17 BIOSIS COPYRIGHT 2002 BIOSIS
TI Characterization and gene cloning of **raffinose synthase** from Cucumis sativus.

L2 ANSWER 15 OF 17 BIOSIS COPYRIGHT 2002 BIOSIS
TI Purification of **raffinose synthase** from Cucumis sativus leaves.

L2 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2002 ACS
TI Distribution and immunolocalization of stachyose synthase in Cucumis melo L

L2 ANSWER 17 OF 17 AGRICOLA DUPLICATE 3
TI **Raffinose synthase** and galactinol synthase in developing seeds and leaves of legumes.

=> d 14

L2 ANSWER 14 OF 17 BIOSIS COPYRIGHT 2002 BIOSIS
AN 1998:339293 BIOSIS
DN PREV199800339293
TI Characterization and gene cloning of **raffinose synthase**
from *Cucumis sativus*.
AU Ohsumi, Chieko; Nozaki, Jinshi; Kida, Takao
CS Ajinomoto Co. Inc., CRL., Kawasaki 210 Japan
SO Plant and Cell Physiology, (1998) Vol. 39, No. SUPPL., pp. S131.
Meeting Info.: 1998 Annual Meeting of the Japanese Society of Plant
Pathologists Tokyo, Japan May 3-5, 1998 Japanese Society of Plant
Pathologists
. ISSN: 0032-0781.
DT Conference
LA English

=> d 13

L2 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2002 ACS
AN 1998:217308 CAPLUS
DN 128:318794
TI Cloning of cDNA for **raffinose synthase** from cucumber,
and its use for preparing raffinose or transgenic plants low in
raffinose-type oligosaccharides
IN Oosumi, Chieko; Nozaki, Shinji; Kida, Takao
PA Ajinomoto Co., Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10084973	A2	19980407	JP 1997-111124	19970428
	US 6166292	A	20001226	US 1997-846234	19970428
	WO 9849273	A1	19981105	WO 1997-JP3879	19971024
	W: AU, BR, CA, CN, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9881874	A1	19981124	AU 1998-81874	19971024
	AU 735864	B2	20010719		
	EP 994186	A1	20000419	EP 1997-909634	19971024
	R: DE, FR, GB, NL				
	BR 9714675	A	20000627	BR 1997-14675	19971024
	CN 1259996	A	20000712	CN 1997-182260	19971024
PRAI	JP 1996-107682	A	19960426		
	JP 1996-198079	A	19960726		
	JP 1997-111124	A	19970428		
	WO 1997-JP3879	W	19971024		

=> d 8

L2 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2002 ACS
AN 2000:774015 CAPLUS
DN 133:330526
TI Novel clones of the soybean **raffinose synthase** gene
promoter and uses thereof for foreign gene expression in plant cells
IN Ishige, Fumiharu; Watanabe, Eihiro; Oeda, Kenji
PA Sumitomo Chemical Co., Ltd., Japan
SO Eur. Pat. Appl., 36 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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File Copy 09/30/1.766

=> s raffinose synthase

L1 9 RAFFINOSE SYNTHASE

=> d 11 1-9

L1 ANSWER 1 OF 9 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1998:339293 BIOSIS
DN PREV199800339293
TI Characterization and gene cloning of **raffinose synthase**
from Cucumis sativus.
AU Ohsumi, Chieko; Nozaki, Jinshi; Kida, Takao
CS Ajinomoto Co. Inc., CRL., Kawasaki 210 Japan
SO Plant and Cell Physiology, (1998) Vol. 39, No. SUPPL., pp. S131.
Meeting Info.: 1998 Annual Meeting of the Japanese Society of Plant
Pathologists Tokyo, Japan May 3-5, 1998 Japanese Society of Plant
Pathologists
. ISSN: 0032-0781.
DT Conference
LA English

L1 ANSWER 2 OF 9 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1998:339292 BIOSIS
DN PREV199800339292
TI Purification of **raffinose synthase** from Cucumis
sativus leaves.
AU Nozaki, Jinshi; Ohsumi, Chieko; Kida, Takao
CS Ajinomoto Co. Inc., CRL., Kawasaki 210 Japan
SO Plant and Cell Physiology, (1998) Vol. 39, No. SUPPL., pp. S131.
Meeting Info.: 1998 Annual Meeting of the Japanese Society of Plant
Pathologists Tokyo, Japan May 3-5, 1998 Japanese Society of Plant
Pathologists
. ISSN: 0032-0781.
DT Conference
LA English

L1 ANSWER 3 OF 9 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1990:197835 BIOSIS
DN BA89:104506
TI **RAFFINOSE SYNTHASE** AND GALACTINOL SYNTHASE IN
DEVELOPING SEEDS AND LEAVES OF LEGUMES.
AU CASTILLO E M; DE LUMEN B O; REYES P S; DE LUMEN H Z
CS DEP. NUTRITIONAL SCI., UNIV. CALIFORNIA, BERKELEY, CALIF. 94720.
SO J AGRIC FOOD CHEM, (1990) 38 (2), 351-355.
CODEN: JAFCAU. ISSN: 0021-8561.
FS BA; OLD
LA English

L1 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2000 ACS
AN 1999:708499 CAPLUS
DN 131:334132
TI Plant **raffinose synthase** genes, cDNA sequences and
uses thereof, and methods for their detection and amplification
IN Watanabe, Eihiro; Oeda, Kenji
PA Sumitomo Chemical Company, Limited, Japan
SO Eur. Pat. Appl., 55 pp.
CODEN: EPXXDW
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 953643	A2	19991103	EP 1999-107430	19990427
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 11313677	A2	19991116	JP 1998-120550	19980430
	JP 2000014389	A2	20000118	JP 1998-351246	19981210
	AU 9923967	A1	19991111	AU 1999-23967	19990426
	CN 1237635	A	19991208	CN 1999-105331	19990430
PRAI	JP 1998-120550	19980430			
	JP 1998-120551	19980430			
	JP 1998-345590	19981204			
	JP 1998-351246	19981210			

L1 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2000 ACS

AN 1999:296900 CAPLUS

DN 131:2183

TI Cloning of cDNA for **raffinose synthase** from cucumber and soybeans and use for regulating raffinose content in plants

IN Osumi, Chieko; Nozaki, Jinji; Kida, Takao

PA Ajinomoto Co., Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 37 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11123080	A2	19990511	JP 1997-292969	19971024

L1 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2000 ACS

AN 1998:217308 CAPLUS

DN 128:318794

TI Cloning of cDNA for **raffinose synthase** from cucumber, and its use for preparing raffinose or transgenic plants low in raffinose-type oligosaccharides

IN Oosumi, Chieko; Nozaki, Shinji; Kida, Takao

PA Ajinomoto Co., Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10084973	A2	19980407	JP 1997-111124	19970428
	WO 9849273	A1	19981105	WO 1997-JP3879	19971024
	W: AU, BR, CA, CN, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	AU 9881874	A1	19981124	AU 1998-81874	19971024
	EP 994186	A1	20000419	EP 1997-909634	19971024
	R: DE, FR, GB, NL				
PRAI	JP 1996-107682	19960426			
	JP 1996-198079	19960726			
	JP 1997-111124	19970428			
	WO 1997-JP3879	19971024			

L1 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2000 ACS

AN 1992:55624 CAPLUS

DN 116:55624

TI Distribution and immunolocalization of stachyose synthase in Cucumis melo L

AU Holthaus, Uta; Schmitz, Klaus

CS Bot. Inst., Univ. Koeln, Cologne, W-5000/41, Germany
SO Planta (1991), 185(4), 479-86
CODEN: PLANAB; ISSN: 0032-0935
DT Journal
LA English

L1 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2000 ACS
AN 1990:115882 CAPLUS
DN 112:115882
TI **Raffinose synthase** and galactinol synthase in
developing seeds and leaves of legumes
AU Castillo, Eugenia M.; De Lumen, Benito O.; Reyes, Pilar S.; De Lumen,
Helen Z.
CS Dep. Nutr. Sci., Univ. California, Berkeley, CA, 94720, USA
SO J. Agric. Food Chem. (1990), 38(2), 351-5
CODEN: JAFCAU; ISSN: 0021-8561
DT Journal
LA English

* L1 ANSWER 9 OF 9 AGRICOLA *

AN 91:43724 AGRICOLA
DN IND91018838
TI **Raffinose synthase** and galactinol synthase in
developing seeds and leaves of legumes.
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AV DNAL (381 J8223)
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DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

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L1 ANSWER 9 OF 9 AGRICOLA

AB The raffinose family oligosaccharides (RFO) have been proposed to play roles in cold acclimation in plants, seed viability, and flatulence in humans after consumption of beans. Galactinol synthase (GS) and **raffinose synthase** (RS) are believed to be key enzymes in the biosynthesis of RFO. To begin to understand the roles proposed for RFO, we have begun a study of GS and RS in soybean and kidney beans. Both exchange and synthesis reactions of RS were detected in developing soybean seed as early as 5 days after flowering (DAF). While the RS synthesis activity leveled off at 15 DAF, the RS exchange activity continued to increase up to 60 DAF. The RS exchange and synthesis activities also differed in their reaction kinetics, pH optima, and purification properties. GS activity was highest at the late stages of kidney bean development. Consistent with the proposed role of RFO in cold acclimation, the GS activities in the developing seeds and leaves of soybean and kidney bean increased 3-4-fold upon exposure of whole plants to 4 degrees C. This is the first report of GS activity in kidney bean and RS in soybean.